

**PENGARUH SARI MARKISA UNGU (*Passiflora edulis var edulis*)
TERHADAP KADAR MALONDIALDEHID TIKUS (*Rattus norvegicus*)
JANTAN GALUR WISTAR MODEL DIABETES MELITUS**

ABSTRAK

Latar Belakang: Hiperglikemia kronis pada diabetes melitus dapat memicu stres oksidatif dan meningkatkan kadar malondialdehid (MDA) akibat proses peroksidasi lipid. Markisa ungu (*Passiflora edulis var edulis*) mengandung komponen fitokimia non nutrisi berupa antioksidan yaitu karotenoid, flavonoid, dan vitamin C yang berpotensi dalam menurunkan kadar MDA pada tikus putih (*Rattus norvegicus*). Penelitian ini bertujuan untuk mengetahui pengaruh pemberian sari markisa ungu (*Passiflora edulis var edulis*) berbagai dosis terhadap kadar MDA tikus putih (*Rattus norvegicus*) jantan model Diabetes Melitus. **Metode:** Desain penelitian ini menggunakan *post test only with control group design* dengan 25 ekor tikus dibagi menjadi 5 kelompok (K); KA (kontrol normal n=5), KB (kontrol negatif n=5), KC (sari markisa ungu 1,05 ml/200gBB n=5), KD (sari markisa ungu 2,1 ml/200gBB n=5), dan KE (sari markisa ungu 4,2 ml/200gBB n=5). Induksi diabetes melitus pada KB, KC, KD, dan KE menggunakan aloksan 120 mg/ kgBB secara intraperitoneal. **Hasil:** Pengukuran kadar MDA menggunakan metode TBARS. Rerata kadar MDA ($\mu\text{mol/L}$) pada KA: $0,602 \pm 0,164$. KB: $2,344 \pm 0,814$, KC: $1,332 \pm 0,253$, KD: $1,142 \pm 0,404$, dan KE: $0,970 \pm 0,256$. Uji *Kruskall Wallis* pada kadar MDA mendapatkan hasil signifikan ($p < 0,05$), selanjutnya *post hoc Mann Whitney* menunjukkan perbedaan signifikan antara kelompok B terhadap kelompok C, D, dan E. Tidak terdapat perbedaan signifikan antara kelompok C terhadap kelompok D, dan E, dan kelompok D terhadap kelompok E. **Kesimpulan:** Kesimpulan penelitian ini adalah terdapat pengaruh pemberian sari markisa ungu terhadap kadar MDA tikus putih (*Rattus norvegicus*) jantan galur Wistar model Diabetes Melitus.

Kata Kunci: diabetes melitus, malondialdehid, sari markisa ungu, stress oksidatif

THE EFFECT OF PURPLE PASSION (*Passiflora edulis var edulis*) JUICE ON MALONDIALDEHID CONTENT OF DIABETES MELLITUS MALE WISTAR RAT (*Rattus norvegicus*)

ABSTRACT

Background: Chronic hyperglycemia in diabetes mellitus can trigger oxidative stress and increasing levels of malondialdehyde (MDA) due to the lipid peroxidation process. Purple passion fruit (*Passiflora edulis var edulis*) contains non-nutritional phytochemical components in the form of antioxidants, namely carotenoids, flavonoids, and vitamin C that have the potential to reduce MDA levels in white rats (*Rattus norvegicus*). This study aims to determine the effect of various doses of purple passion fruit (*Passiflora edulis var edulis*) on MDA levels of Diabetes Mellitus male white mouse (*Rattus norvegicus*). **Method:** : The design of this study used post test only with control group design with 25 rats divided into 5 groups (K); KA (normal control n = 5), KB (negative control n = 5), KC (purple passion fruit juice 1.05 ml / 200gBB n = 5), KD (purple passion fruit extract 2.1 ml / 200gBB n = 5), and KE (purple passion fruit juice 4.2 ml / 200gBB n = 5). Induction of diabetes mellitus in KB, KC, KD, and KE using alloxan 120 mg / kgBB intraperitoneally. **Result:** Measurement of MDA levels using the TBARs method. The mean MDA level ($\mu\text{mol} / \text{L}$) on the train: 0.602 ± 0.164 . KB: $2,344 \pm 0,814$, KC: $1,332 \pm 0,253$, KD: $1,142 \pm 0,404$, and KE: $0,970 \pm 0,256$. The Kruskal Wallis test on MDA levels obtained significant results ($p < 0.05$), then post hoc Mann Whitney showed significant differences between group B to groups C, D, and E. There were no significant differences between group C for groups D, and E and group D to group E. **Conclusion:** The conclusion of this study is that there is an effect of giving purple passion fruit juice to MDA levels of Wistar strain male white rat (*Rattus norvegicus*) model Diabetes Mellitus.

Keyword: diabetes melitus, malondialdehyd, oxidative stress, purple passion fruit juice.